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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,762	04/03/2001	Hisayoshi Fujimoto	KIX0142-US	9115

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10/03/2002

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EXAMINER

O NEILL, GARY W

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,762

Applicant(s)

FUJIMOTO ET AL.

Examiner

Gary O'Neill

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 9-20 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Detailed Action*.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. Receipt is acknowledged of Information Disclosure Statement submitted 4/30/01, which has been considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-7, 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by de Montebello (3706486).

de Montebello discloses, as in claim 1, a lens array unit (fig.7) comprising: a first lens array provided with a plurality of first convex lenses (52) and a first transparent holder (col.5, lines 22-42) formed integral with the first lenses, each of the first lenses having first and second lens surfaces; a second lens array provided with a plurality of second convex lenses (46) and a second transparent holder (col.5, lines 22-42) formed integral with the second lenses, each of the second lenses having third and fourth lens

surfaces, the second lens array being attached to the first lens array so that the third lens surfaces face the second lens surfaces; and a light shield (22) mounted on the first lens array and provided with a plurality of through-holes (30) facing the first lens surfaces.

de Montebello discloses, as in claim 2, the lens array unit wherein the first and second lens arrays cooperate to form a non-inverted and non-magnified image of an object (col.1, lines 20-52, photography).

de Montebello discloses, as in claim 3, the lens array unit, wherein each of the through-holes has a dark-colored inner wall surface (col.4, lines 28-45, black).

de Montebello discloses, as in claim 5, the lens array unit wherein the light shield and the first lens array are provided with engaging means including a recess and a projection fitted into the recess (col.4, lines 40-48; & col.5, lines 43-67, register).

de Montebello discloses, as in claim 6, the lens array unit wherein the light shield is attached to the first lens array in a stretched state (col.5, lines 63-67; & col.6, lines 1-8, under pressure).

de Montebello discloses, as in claim 7, the lens array unit wherein the light shield (22) includes a plurality of segments connected to extend in a predetermined direction (fig.6).

de Montebello discloses, as in claim 9, the lens array unit wherein the segments are equal in configuration and size to each other (fig.6).

de Montebello discloses, as in claim 10, the lens array unit wherein each of the first lens surfaces is convex and at least partially projects into a relevant one of the through-holes of the light shield (fig.7).

de Montebello discloses, as in claim 11, the lens array unit wherein the first lens surfaces are diametrically greater than the throughholes of the light shield (fig.7).

de Montebello discloses, as in claim 12, a lens array unit (fig.7) comprising: a lens array provided with a plurality of lenses (52) and a transparent holder (col.5, lines 22-42) formed integral with the lenses, each of the lenses having first and second lens surfaces; and a light shield (22) formed with a plurality of through holes (30) facing the first lens surfaces.

de Montebello discloses, as in claim 13, a lens array unit (fig.7) comprising: a first lens array provided with a plurality of first convex lenses (46) arranged in a line, each of the first lenses having first and second lens surfaces; a second lens array provided with a plurality of second convex lenses (52) arranged in a line, each of the second lenses having third and fourth lens surfaces, the second lens array being attached to the first lens array so that the third lens surfaces face the second lens surfaces; and light shielding means (22) for partially covering at least either one of the third and the fourth lens surfaces of each second lens.

de Montebello discloses, as in claim 14, the lens array unit wherein the light shielding means comprises a dark-colored layer formed directly on at least either one of the third and the fourth lens surfaces of each second lens (col.4, lines 28-45, black).

de Montebello discloses, as in claim 15, the lens array unit wherein the first lens array is formed with grooves (48) for optically separating the first lenses from each other, each of the grooves being provided with a dark-colored light shielding member (22).

de Montebello discloses, as in claim 16, the lens array unit wherein each of the first and the second lens arrays is provided with a holder (col.5, lines 22-42) formed integral with the convex lenses.

de Montebello discloses, as in claim 17, the lens array unit wherein the holder of the first lens array includes obverse and reverse surfaces spaced from each other in an axial direction of the first lenses, the obverse and the reverse surfaces being covered with light shielding means (col.5, lines 22-42).

de Montebello discloses, as in claim 18, the lens array unit wherein the holder of the second lens array includes obverse and reverse surfaces spaced from each other in an axial direction of the second lenses, at least either one of the obverse and the reverse surfaces being covered with light shielding means (col.5, lines 22-42).

de Montebello discloses, as in claim 19, a lens array (fig.7) comprising: a plurality of lenses (52) arranged in a line and each having a lens surface; and light shielding means (22) for partially covering the lens surface; wherein the lens surface includes peripheral portions (54) spaced from each other along said line, the light shielding means covering the peripheral portions.

de Montebello discloses, as in claim 20, a method of forming an image of an object, the method comprising the steps of: preparing a lens array unit (fig.7) which

includes a first lens array provided with first lenses (46) and a second lens array provided with second lenses (52), the first lens array being arranged closer to said object than the second lens array is, each of the second lenses having a light inlet surface and a light outlet surface; and partially shielding (22) at least either one of the light inlet surface and the light outlet surface for adjusting brightness of light spots formed along a predetermined focal line.

Allowable Subject Matter

5. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in claims 4 and 8, wherein the claimed invention comprises a lens array unit having a light shield made of a dark-colored resin material and wherein adjacent ones of light shield segments overlap with each other in a thickness direction perpendicular to a predetermined direction, as claimed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing dual lens array units of convex lenses: W. P. Rowland (3357772); Fujimoto et al. (6373635); and Fujimoto et al. (6449099).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary O'Neill whose telephone number is 703-306-4828. The examiner can normally be reached on Monday - Thursday, 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y Epps can be reached on 703-308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7725 for regular communications and 703-308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Gary O'Neill
Examiner
Art Unit 2873

GO
September 26, 2002


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800